

Gus

Lands a New Customer

It's Not Only in Trouble-Shooting That Little Things Count

By MARTIN BUNN

IT WAS about three o'clock of a hot spring afternoon when Joe Clark came into the Model Garage shop and found his partner, Gus Wilson, busy at his workbench scrubbing a pair of very dirty license plates with soap and water.

Joe sat down on a convenient box and said: "Phew! It's hot!" Then he asked, "What're you doing that for, Gus?"

"To get 'em clean, of course," Gus told him, grinning. "Seriously, just because there's a war on is no reason why people should let their cars look any worse than they have to. Keeping your bus clean and snappy looking is good for your morale—like getting a haircut or having your shoes shined. There's nothing that makes a car look sloppier than dirty tags, so I'm brightening up this pair."

Joe grunted. Then, after Gus had dried the plates and had taken down another jar and a brush, Joe asked, "What are you going to do now?"

"Varnish 'em," Gus said.

Joe grunted again. "Whose car is it you're taking so darned much trouble with this hot day?" he wanted to know.

"Woodward's," Gus told him. "You know the Woodwards, don't you? They live next door to Doc Marvin. Woodward's got two cars he keeps running, and he'd be a good customer for us, but somehow he's never given us anything but a couple of small jobs. Anyway, he brought his coupe in while I was at lunch, and left word he'd be back this afternoon to tell me what work he wanted done on it. Not having much to do—for a change—I thought maybe fixing up his license tags would make a hit with him, and—here he is now."

Woodward came in smiling. He is middle-aged, stout, and prosperous-looking. "Hello, Mr. Wilson," he greeted Gus cordially. "I missed you at noon, but I wanted to talk with you personally about my car, so I left word with your mechanic that I'd be back."

"I got your message," Gus nodded. "What's the matter with your coupe, Mr. Woodward?"

"That's what I'd like you to find out," Woodward said. "I've been having trouble with it for a couple of weeks—and I need

the car badly. The motor doesn't run well at low speeds. Worse than that, I'm not getting the mileage I should."

"A car that wastes gas," Gus said seriously, "is right in the public-enemy class nowadays. When did you first notice this trouble?"

"Oh, a week or maybe ten days ago," Woodward told him. "The first indication of anything wrong I noticed was the motor pinging. I took the car into a garage down in the city, and they said the pinging was caused by the spark being advanced too far. So they retarded the spark. That stopped the noise, but it didn't make the motor run any smoother at low speeds, and I'm sure I'm still not getting the mileage I should."

"O.K.," Gus said.

"We'll get right at it," Joe Clark added. He walked to the door with Woodward.

A half hour later, keenly interested in the opportunity of acquiring the prosperous two-car owner as a steady customer, Joe came back into the shop. He found his partner seated on the end of his workbench, smoking placidly as he eyed the Woodward coupe.

"Find the trouble?" Joe demanded.

"Nope," Gus said, "and for a good reason. I haven't started to look for it."

"What!" Joe yelled. "Didn't you hear Woodward say he needed his car badly?"

"Sure, I heard him," Gus said. "But did you ever know anyone to come into this shop without saying that he needed his car badly and in a hurry? But all right, Joe, don't get yourself all hot and bothered. I'd

GUS SAYS:

That old battery in your bus is a mighty sensitive chemical gadget. If you leave it discharged, it sulfates and may be ruined for keeps. A battery is healthiest when it's worked good and hard. If you don't drive enough to keep it busy, have it serviced regularly.

like to land Woodward as a regular customer as much as you would. I've just been doing a little heavy thinking before starting work." Gus slid off the bench and gave his partner a playful jab in the ribs. "You ought to try that sometime, Joe—I've known it to pay dividends."

Gus climbed into the coupe and stepped on the starter. The engine took off promptly and ran smoothly at both low and high speeds. But after a few minutes there was a change. The engine still ran smoothly at high speed, but when Gus eased his foot off the accelerator pedal, the engine lost its smoothness, although it didn't actually miss.

Switching off the engine, Gus got out of the car. "It might be the fuel line," he told Joe. "I don't think it is, but I'll have a look just to be on the safe side."

He checked the fuel line carefully from tank to carburetor and found it in perfect condition. Then he checked the carburetor adjustment.

"Gas line is O.K.," he said, more to himself than to Joe. "The trouble *could* be somewhere in the ignition system. Let's see, now."

He went over the ignition as carefully as he had checked the fuel line. Distributor, spark plugs, and wiring were in good condition.

"Leaky valves?" Joe suggested.

"I don't think so. When the valves leak, the spark plugs usually get sooty, and these are clean," Gus said. "But the valves just might leak, at that. No harm in finding out."

He got the compression gauge from the instrument cabinet. After running the engine for a couple of minutes to warm it up

with each cylinder, he shook his head. "No valve leaks," he announced. "The compression is O.K. in all the cylinders, and there's only a couple of pounds variation between the highest and the lowest reading. So the valves must be all right."

Gus refilled and lighted his pipe and—as he always does when he is thoroughly puzzled—tipped his long-peaked mechanic's cap over his left eyebrow and scratched behind his right ear with a speculative forefinger. Then he suddenly started the engine and stood listening intently.

"Fuel line is all right, and so is the ignition," he thought aloud. "The carburetor is O.K. So are the valves. All the cylinders are getting gas and a good hot spark. The engine ought to run smoothly, but it doesn't run smoothly. There's a reason, but what is it?" He listened again. "Hear anything unusual, Joe?" he asked after a minute.

"Can't say I do," Joe admitted.

"I can," Gus said thoughtfully. "It sounds to me as if the engine is getting too lean a mixture. Maybe there's a leak in the intake pipe."

Gus went over to his workbench and came back with a squirt can of gasoline. He squirted gasoline on the intake-pipe joints, then listened intently again. Finally he shook his head in discouragement. "Another hope gone," he growled. "If there was a leak in the intake pipe, the engine would have sounded different when I squirted gas on the joints, because the mixture would have been richer. But I'd bet a dollar that—" He broke off and stood staring at the coupe.

"You'd bet a dollar that—what?" Joe prompted him anxiously.

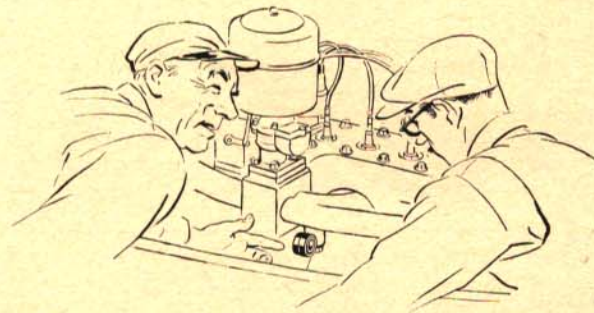
Gus didn't answer. He was examining the heat-control valve on the manifold. "I've found it!" he yelled. "Look here, Joe!"

Joe went over to him.

"Know how this valve works?" Gus asked. Joe admitted that he didn't. "Well," Gus explained, "that thermostatic spring on the side of the manifold controls the position of the heat-control valve. When the engine is cold, the valve is closed, so the hot gases pass around the intake manifold and heat the mixture. This gives you smooth and efficient running when the engine is cold. As the engine warms up, the thermostatic spring

gradually loses its tension, allowing the valve to open. Then the hot gases pass right out through the exhaust pipe. Get it?"

"Yes, I get it," Joe said. "But what's the matter with the valve anyway, and what's that got to do with making Woodward's bus run the way it does?"



"The thermostatic spring there," Gus explained, "controls the opening and closing of a manifold heat-control valve."

again, he stopped it, removed the No. 1 spark plug, screwed the compression gauge into its hole, and opened the throttle all the way. Then he turned the engine over a few times with the starting motor and jotted down the compression reading on the back of an envelope. After repeating this process



'A car that wastes gas,' Gus said seriously, 'is right in the public-enemy class nowadays.'

Gus laughed. "The trouble is," he said, pointing to the valve, "carbon has formed on the valve shaft and makes it stick in its closed position. With the valve staying closed after the engine warms up, the hot gases, instead of passing out through the exhaust pipe as they should, keep on passing around the intake manifold.

"This heat," Gus continued after a pause, "causes too great an expansion of the gas inside the intake manifold, and the result is that too little vaporized gas enters the combustion chamber. That causes poor engine performance, especially at low speeds.

"Freeing the heat-control valve so it'll work properly will improve the performance of the engine and also increase the mileage. That's what Mr. Woodward wants, so it ought to please him now that we've found the cause of his trouble. I'll have it fixed in a jiffy."

"Huh!" Joe grunted disgustedly. "That's not much of a job, is it? I was in hopes this would turn out to be something serious—the kind of a job that would let us show Woodward the high-class repair work we can do. Customers never give you any credit for finding out what's the matter with a car—but most of 'em are impressed when you do a job that costs them plenty but makes their bus run like new. They like to

think it was a big job—something that nobody else could have done—and also that they're getting a lot of money's worth."

"Check!" Gus said.

Two days later Joe Clark came high-stepping into the shop from the office. A wide grin decorated his usually serious countenance.

"What are you looking so darned pleased about now?" Gus demanded of his partner. "Has somebody dropped one of those blockbuster bombs on Hitler, or has gas rationing been called off by Washington all of a sudden?"

"Unfortunately, no," Joe said. "But Mr. Woodward just called up and said that from now on he is going to give us all his business."

"Good!" Gus exclaimed. "Well, there's one customer who appreciates a good trouble-shooting job."

Joe shook his head. "That's where you're all wrong," he said. "Mr. Woodward didn't say a word about your getting his coupe running right again. What converted him to the Model Garage was the way you cleaned up his license plates."

Gus looked disappointed. Then he laughed. "Oh, well," he said, "so long as you catch the fish, what difference does it make what kind of bait you use?"